

REMARKS

Claims 1-8, 11 and 14 are pending in the application and stand rejected.

Claims 2 and 5 are hereby canceled by this Amendment without prejudice or disclaimer.

Claims Rejected Under 35 U.S.C. § 102

Claims 1-9, 11 and 14 are rejected under 35 U.S.C. § 102(e) as being anticipated by Wilson.

Applicants submit that claim 1 is patentable because Wilson fails to disclose each and every element of the claim. Claim 1 recites, *inter alia*,

an acceleration detection unit mounted in the pen-shaped body which detects respective axial direction accelerations along an axis of the movement of the pen-shaped body; and

a control unit which calculates absolute coordinates of the movement of the pen-shaped body from the tilt angle measured at the magnetic field detection unit and the acceleration measured at the acceleration detection unit,

wherein the control unit calculates a handwriting trajectory of a tip of the pen-shaped body based on the absolute coordinates of the movement of the pen-shaped body,

wherein the control unit converts 3-axis acceleration measurement values detected at the acceleration detection unit into measurement values of a pen tip of the pen-shaped body to generate converted measurement values, and applies the converted measurement values of the pen tip for calculating absolute coordinates.

In the Response to Argument section of the Final Office Action, the Examiner asserts Wilson discloses an acceleration unit mounted in the pen-shaped body which detects respective axial direction acceleration movements of movement of the pen-shaped body. (*Office Action*, p. 5). As support for this position, the Examiner contends Wilson discloses that “the orientation of the pointer is defined in terms of its pitch, roll and yaw angle about the x, y, z axes of the coordinate system wherein the accelerometer signals representing the pitch and roll are used to establish the rotation matrix that defines the composition of rotation.” (*Office Action*, p. 5). Then the Examiner concludes “the accelerometer of Wilson et al. does ‘detect respective axial direction accelerations of the movement of the pen-shaped body.’” (*Id.*). The Examiner maintains this position in the Advisory Action. (*Advisory Action*, p.3).

However, Wilson merely discloses the measurement of accelerations (rotational) about an axis. In this regard Wilson discloses:

Angles defining the pitch of the pointer about the x-axis and the roll of the device about the y-axis are computed from the normalized outputs of the accelerometer.
(4:10-14).

More specifically, Wilson discloses how the orientation is defined and how it is determined. In this regard, Wilson provides:

The orientation of the pointer is defined in terms of its pitch, roll and yaw angle about the respective x, y and z axes of the environment’s predefined coordinate system. Even though the magnetometer is a 3-axis device, the pitch, yaw and roll angles cannot be computed directly from the recorded magnetometer values contained in the orientation message. However, it is possible to use the accelerometer readings in conjunction with the

magnetometer outputs to compute the orientation. The pitch and roll angles of the pointer are then computed from the normalized x-axis and y-axis accelerometer values, respectively.
(18:20- 38). (portions omitted).

Consequently, Wilson only provides support that the accelerometer is used with respect to a roll about an x-axis and y-axis orientation, i.e., pitch, roll and yaw angles. Nowhere does Wilson disclose, contemplate or utilize acceleration along an axial direction.

Moreover, the Examiner fails to provide any evidence or scientific reasoning to establish that detecting an axial direction acceleration along an axis is an inherent functional feature of Wilson accelerometer. Absent any such scientific reasoning, inherency has not been established. (See *Ex parte Whalen II*, Appeal 2007-4423, July 23, 2008 (*citing Ex parte Skinner*, 2 USPQ 2d 1788, 1789 (BPAI 1986)).

Rather, the Examiner's reasoning is that "Wilson et al. disclose[s] that the orientation of the pointer is defined in terms of its pitch, roll, and yaw angle about the respective x, y, z axes of the coordinate system wherein the accelerometer signals representing the pitch and roll are used to establish the rotation matrix that defines the composition of rotation about the x, y, z axes of the coordinate system (see col. 18, lines 35-45 and 51-57), i.e., the accelerometer of Wilson et al. does 'detect respective axial direction accelerations.' (*Final Office Action*, p.6).

However, in contrast to this position, Applicants respectfully note that the Examiner concedes within this argument that the orientation is obtained in terms of "pitch, roll and yaw angle about the x, y, z axes." (emphasis added). This is in contrast to being along the x, y or z axes, which correlates to an axial direction. In other words, Applicants submit that rotating "about" an axis does not correlate to rotating along an axial direction. Rather, Wilson merely

discloses that the accelerometer provides x, y and z axes orientation signals, i.e., pitch, yaw and roll. (col. 3, lines 15-20; col. 8, lines 16-42).

Thus, Applicants submit that Wilson fails to disclose, at least, an acceleration detection unit mounted in the pen-shaped body which detects respective axial direction accelerations,” as recited in claim 1. Additionally, because claims 4, 7 and 8 recite a similar feature, Applicants submit these claims are allowable for the same reasons set forth above. Finally, Applicants submit claims 3, 6, 11 and 14 are allowable, at least by virtue of their dependency.

Additionally, Applicants also submit that Wilson fails to disclose, a control unit which calculates absolute coordinates of the movement of the pen-shaped body from the tilt angle measured at the magnetic field detection unit and the acceleration measured at the acceleration detection unit, wherein the control unit converts 3-axis acceleration measurement values detected at the acceleration detection unit into measurement values of a pen tip of the pen-shaped body to generate converted measurement values, and applies the converted measurement values of the pen tip for calculating absolute coordinates” as recited in claim 1.

Rather, Wilson merely discloses the accelerometer and magnetometer provide x-axis, y-axis and z-axis orientation signals. In order to obtain the location, or absolute coordinates of the pointer, Wilson relies on video input from video cameras. (col. 3, lines 64-67; col. 8, lines 37-59; *see* 3D location of pointer FIG. 8 step 806 and col. 15, lines 57-60). Consequently, the absolute coordinates of the pointer are determined wholly independent of the orientation. Rather, the orientation is used only with the location data (absolute coordinates) to determine where the pointer is pointing.

Thus, Applicants submit Wilson fails to disclose “a control unit which calculates absolute coordinates of the movement of the pen-shaped body from the tilt angle measured at the magnetic field detection unit and the acceleration measured at the acceleration detection unit,” as recited in claim 1. Additionally, because claims 7 and 8 recite a similar feature, Applicants submit these claims are allowable for the same reasons set forth above. Finally, Applicants submit claims 3 and 14 are allowable, at least by virtue of their dependency.

Finally, Applicants submit Wilson fails to disclose “wherein the control unit calculates a handwriting trajectory of a tip of the pen-shaped body based on the absolute coordinates of the movement of the pen-shaped body,” as recited in claim 1. Rather, Wilson is merely directed to selecting objects using a wireless pointer 10 at objects distant from the wireless pointer 10. (col. 8, lines 16-22). No handwriting trajectory of the tip is contemplated by Wilson.

Thus, Applicants submit claim 1 is allowable for this additional reason. Additionally, because claims 4, 7 and 8 recited a similar feature, Applicants submit these claims are allowable for the same reasons set forth above with regard to claim 1. Finally, Applicants submit claims 3, 6, 11 and 14 are allowable, at least by virtue of their dependency.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Application No.: 10/803,968

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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